

CLAIMS

1. An internal imaging probe including:
 - a rotating endoscope shaft having an imaging element;
 - a fixed endoscope shaft;
 - a motor affixed to said fixed endoscope shaft;
 - a driving cog wheel attached to said motor; and
 - a driven cog wheel attached to said rotating endoscope shaft;said driving cog wheel operatively engaging said driven cog wheel to rotate said rotating endoscope shaft relative to said fixed endoscope shaft.
2. The probe of claim 1 further including a control handle, wherein said control handle includes said fixed endoscope shaft.
3. The probe of claim 1 further including a control handle, wherein a portion of said fixed endoscope shaft protrudes from said control handle.
4. The probe of claim 1, wherein said motor is located within said fixed endoscope shaft.
5. The probe of claim 2, wherein said motor is located within said fixed endoscope shaft.
6. The probe of claim 3, wherein said motor is located within said fixed endoscope shaft.

7. The probe of claim 1 further including an O-ring forming a seal between said rotating endoscope shaft and said fixed endoscope shaft.

8. A medical imaging system including a probe for imaging internal structures of a patient, said probe including:

- a rotating endoscope shaft having an imaging element;

- a fixed endoscope shaft;

- a motor affixed to said fixed endoscope shaft;

- a driving cog wheel attached to said motor; and

- a driven cog wheel attached to said rotating endoscope shaft;

said driving cog wheel operatively engaging said driven cog wheel to rotate said rotating endoscope shaft relative to said fixed endoscope shaft.

9. The probe of claim 8 further including a control handle, wherein said control handle includes said fixed endoscope shaft.

10. The system of claim 8 further including a control handle, wherein a portion of said fixed endoscope shaft protrudes from said control handle.

11. The probe of claim 8, wherein said motor is located within said fixed endoscope shaft.

12. The probe of claim 9, wherein said motor is located within said fixed endoscope shaft.

13. The probe of claim 10, wherein said motor is located within said fixed endoscope shaft.

14. The system of claim 8 further including an O-ring forming a seal between said rotating endoscope shaft and said fixed endoscope shaft.

15. An internal imaging probe including:

- a control handle;

- a rotating endoscope shaft, wherein said rotating endoscope shaft protrudes from said control handle;

- an imaging element attached to said rotating endoscope shaft; and

- a rotation control operable to rotate said imaging element relative to said control handle.

16. The probe of claim 15 further including a braking mechanism, wherein said braking mechanism may lock said rotating endoscope shaft into a rotated position.

17. The probe of claim 15 further including a screw, wherein said screw restricts rotation of said rotating endoscope shaft.

18. The probe of claim 15 wherein said probe is a transesophageal echocardiography probe.

19. The probe of claim 15 wherein said rotation control includes a rotation control wheel.

20. The probe of claim 15 wherein said imaging element is a transducer.

21. The probe of claim 15 wherein said control handle includes imaging controls for controlling said imaging element.